

Homework 6 – due 03/12/08

Math 601

23. Let R be a domain and M a flat R -module. Show that M is torsion-free. Is there a natural condition on R and M so that the converse holds?

24. Let F, G be adjoint additive functors $R\text{-Mod} \rightarrow R\text{-Mod}$. Suppose that F is exact. Show by example that G need not be exact (although it is automatically left-exact).

25. Dummit-Foote, 13.1, #1.

26. Dummit-Foote, 13.1, #5.